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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/568,659	02/15/2006	Carl Towns	3724.1008-000	5024

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EXAMINER

NGUYEN, KHANH TUAN

ART UNIT	PAPER NUMBER
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1796

MAIL DATE	DELIVERY MODE
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11/14/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/568,659	Applicant(s) TOWNS ET AL.	
	Examiner KHANH T. NGUYEN	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 24-46 is/are pending in the application.
- 4a) Of the above claim(s) 31-40, 45 and 46 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 24-30 and 41-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>02/15/2006 and 06/09/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The preliminary amendment filed on 02/15/2006 is entered and acknowledged by the Examiner. Claims 24-46 are currently pending in the instant application. Claims 1-23 have been canceled. Non-elected claims 31-40 and 45-46 have been withdrawn from further consideration. Claims 24-30 and 41-44 are under examination.

Election/Restrictions

2. Applicant's election with traverse of invention of an oligomer or a polymer having a repeat unit defined by formula (I), Group I (claims 24-30 and 41-40), in the reply filed on 09/99/2009 is acknowledged. The traversal is on the grounds(s) that invention of Group I, II and IV share a common technical feature, namely a first repeating unit and a second repeating unit. This is not found persuasive because the technical feature Groups II and IV do not comprise the combination of a first repeating unit of formula (I) and second repeating unit of formula (II) as require in Group I. Further, the invention of Group I lack the technical feature of oligomerising or polymerising a monomer of formula (II) in the presence of a metal catalyst of variable oxidation state with a as require in Group II. In addition, the invention of Group I lack the technical feature of a gate electrode located on the first side of the insulator as require in Group IV.

The requirement is still deemed proper and is therefore made **FINAL**.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

The Applicant benefits the priority date filed on 08/19/2003.

Information Disclosure Statement

4. The information disclosure statements (IDS) filed on 02/15/2006 and 06/09/2008 have been considered. An initialed copy accompanies this Office Action.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

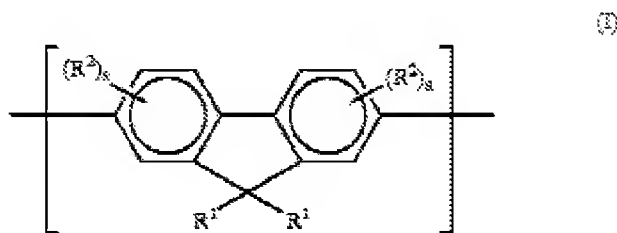
The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. The Examiner would like to note that claims 24-27 and 30 contains the “optional” languages, such as *if and optionally substituted*, which is considered an alternative component or substitution and the prior art need not teach the optional component or substitution to be anticipatory.

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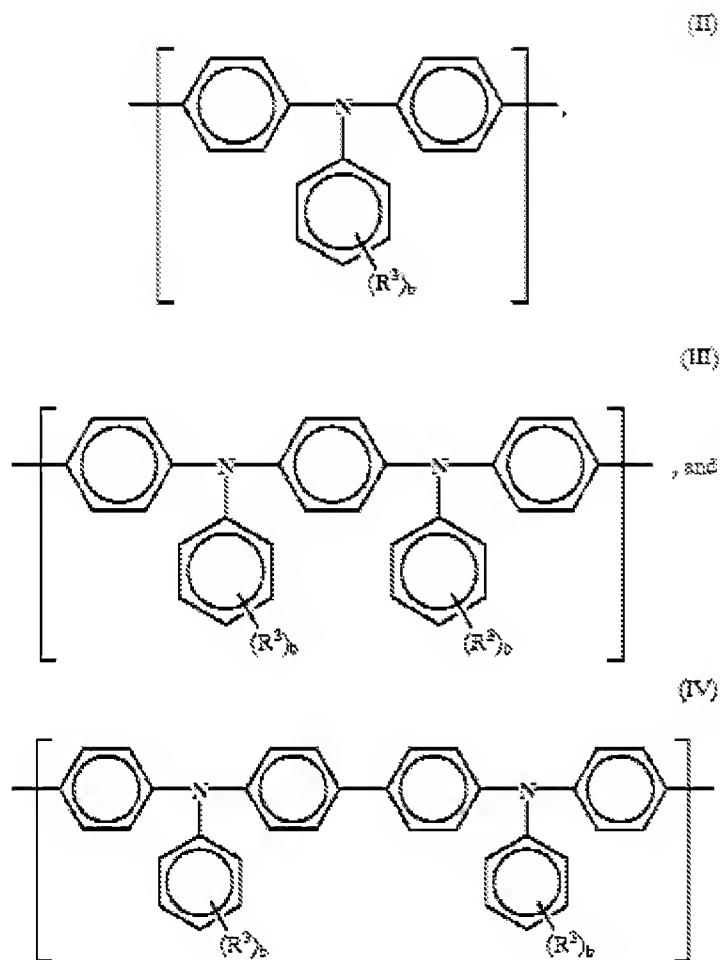
7. Claims 24-30 and 41-43 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. 6,309,763 B1 (hereinafter Woo).

Woo teaches a polymer comprising of 10-90 wt. % of a conjugated group of Formula (I):



and 10-90 wt. % of conjugated groups selected from Formulas (II), (III), (IV) and the mixture thereof (Abstract and Col. 1, line 30 to Col. 2 line 27):

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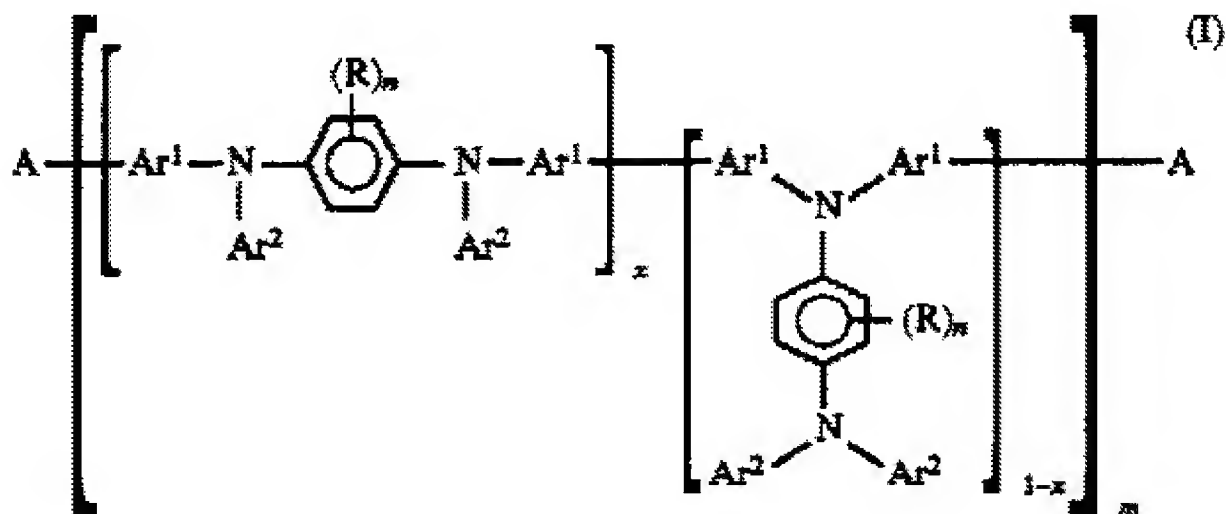
The conjugated groups of Formulas (II) and (III) of Woo are readable on the first repeating unit when each E is a nitrogen, each Ar¹, Ar² and Ar³ is the same or different and independently represent an aryl such as a phenyl, and n is zero and one, respectively. The conjugated group of Formula (I) of Woo is different from the first repeating unit of Formulas (II) and (III) of Woo, thus is considered a second repeating unit. Woo further teaches said polymer is useful in optical devices such as electroluminescent (EL) device (Col. 2, lines 45-52). The organic polymer film may be arranged between an anode material and a cathode material (Col. 2, lines 34-44).

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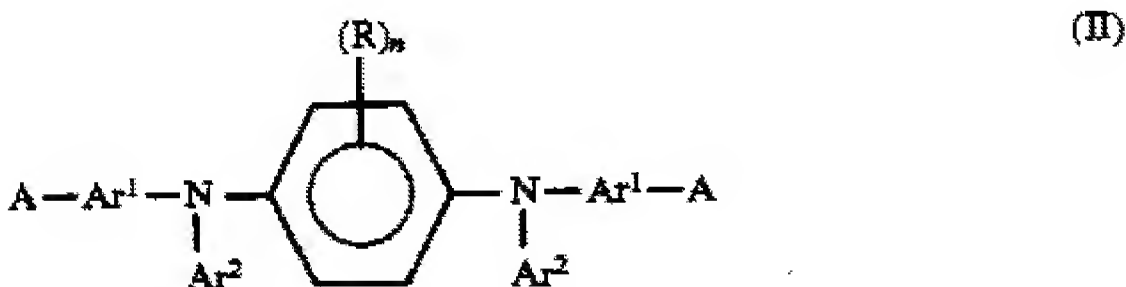
The reference specifically or inherently meets each of the claimed limitations in their broadest interpretations. The reference is anticipatory.

8. Claims 24-30 and 41-43 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. 5,728,801 (hereinafter Wu).

Wu teaches a poly(arylamine) composition comprising of one or more compound of Formula (1) wherein Ar^1 and Ar^2 are independently C_{6-18} aryl moiety and A is H or a halogen (Col. 2, lines 5-35).

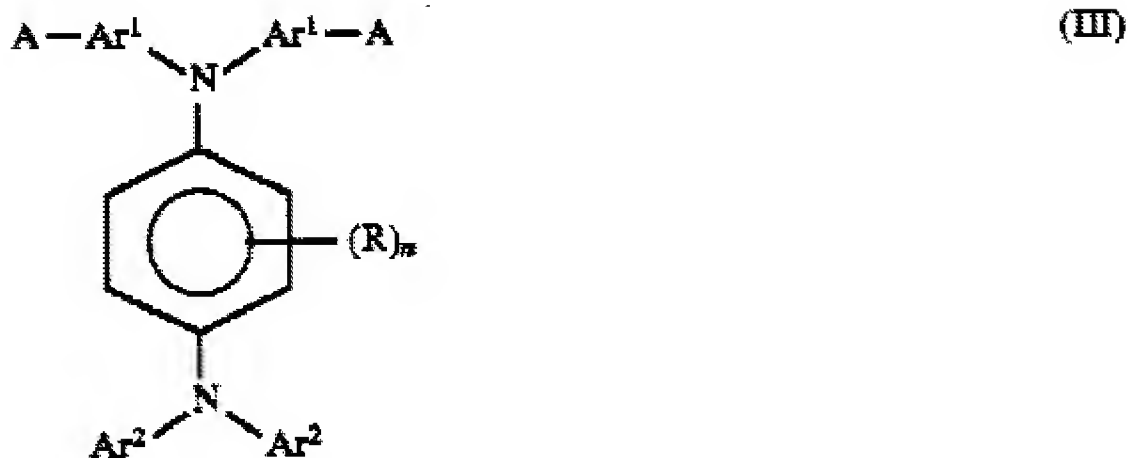


The poly(arylamine) composition is prepared by bounding about 5 to about 100 monomers illustrated in Formulas (II) and (III) (Col. 3, line 53 to Col. 4, line 16):



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and

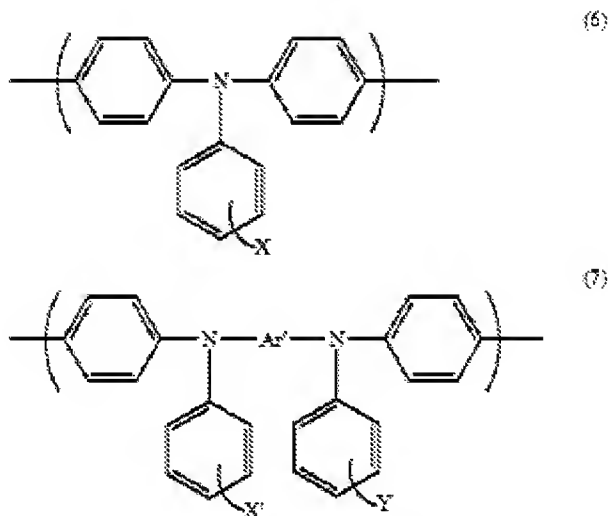


The monomer of Formulas (II) of Wu is readable on the first repeating unit when each E is a nitrogen, each Ar¹ is the same or different and independently represent an aryl such as a phenyl, and n is zero. The monomer of Formulas (II) of Wu is readable on the second repeating unit when the second repeating unit is the same as the first repeating unit. Wu further teaches said polymer is useful in optical devices such as electroluminescent (EL) device (Col. 1, lines 5-55). The organic polymer film may be arranged between an anode material and a cathode material (Col. 1, lines 35-55).

The reference specifically or inherently meets each of the claimed limitations in their broadest interpretations. The reference is anticipatory.

9. Claims 24-30 and 41-43 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Pat. 7,351,788 B2 (hereinafter O'Dell).

O'Dell teaches a method for making a polymer that may contain a first repeat unit of formulas (6) and (7):



and a second repeat unit that is the same or different from the first repeat unit and comprises a substituted or unsubstituted, aryl or heteroaryl group (Abstract and Col. 5, lines 38-68). The first repeat unit of Formulas (6) and (7) O'Dell is considered a first repeat unit when each E is a nitrogen, each Ar¹, Ar² and Ar³ is the same or different and independently represent an aryl such as a phenyl, and n is zero and one, respectively. O'Dell further teaches said polymer is useful in optical devices such as electroluminescent (EL) device (Col. 1, lines 10-15). The organic polymer film may be arranged between an anode material and a cathode material (Col. 1, lines 16-27).

The reference specifically or inherently meets each of the claimed limitations in their broadest interpretations. The reference is anticipatory.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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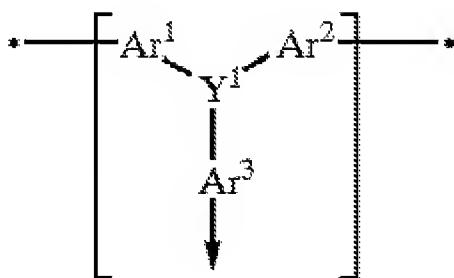
invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over either U.S. Pat. 6,309,763 B1 (Woo), U.S. Pat. 5,728,801 (Wu) or U.S. Pat. 7,351,788 B2 (O'Dell) as applied to the above claims, and further in view of U.S. Pat. 6,630,566 B1 (hereinafter Allen).

Woo, Wu and O'Dell are relied upon as set forth above. With respect to instant claim 44, Woo, Wu and O'Dell did not disclose a switching device comprising of an oligomer or polymer according to claim 24.

In an analogous art, Allen discloses a polymeric material comprising of at least one repeating unit represented by Formula (I) wherein Y^1 may be N or P and Ar^1 , Ar^2 and Ar^3 may be aromatic groups (Abstract and Col. 12, lines 27-63).

Formula 1



The repeating unit of Formulas (I) of Allen is similar to the first repeating unit as claimed when each E is a N or P, each Ar^1 is the same or different and independently represent an aryl such as a phenyl, and n is zero. Allen discloses the polymeric material may comprise of a plurality of repeating units (Col. 12, lines 27-30). As a result, the second or three repeating units may be the same of different from Formula (I) of Allen

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depending on the substitution of Y^1 , Ar^1 , Ar^2 and Ar^3 . Thus, Allen polymer material is similar to the polymeric composition of Woo, Wu and O'Dell. Allen also discloses the said polymeric material may be used in optical devices such as electroluminescent device as suggested by Woo, Wu and O'Dell and switching devices such as transistors (Col. 14, lines 6-44).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the polymeric composition of Woo, Wu and O'Dell into a switching device as suggested by Allen because such utility is expressly suggest by the prior arts. The burden is upon the applicant to prove otherwise. *In re Fitzgerald*, 205 USPQ 594.

12. In view of the foregoing, the above claims have failed to patentably distinguish over the applied art.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHANH T. NGUYEN whose telephone number is (571)272-8082. The examiner can normally be reached on Monday-Friday 8:00-5:00 EST PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KTN/
11/07/2008

/DOUGLAS MC GINTY/
Primary Examiner, Art Unit 1796